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ABSTRACT

This paper presents an overview of the impact of the Elementary Secondary Education Act (ESEA) Title VII Spanish/English bilingual program. Student, teacher, and project data were collected in 38 projects in their fourth or fifth year of funding, along with data from non-Title VII comparison schools. The research design of this national study is discussed, as are major findings related to project and student characteristics. Less than a third of the Title VII students were classified as of limited English-speaking ability. Almost all of the projects were maintenance bilingual programs rather than transitional ones, as mandated by Title VII legislation. The evaluation is divided into six sections: (1) types of students served by Title VII projects in the study; (2) educational goals of Title VII projects in the study; (3) costs associated with the Title VII bilingual project schools and non-Title VII schools for 1975-76; (4) characteristics of teachers and teacher aides in Title VII projects; (5) impact of Title VII program on student achievement and attitudes; and (6) relationship between (a) gains in student achievement and attitudes and (b) classroom procedures, classroom environment, and teaching staff characteristics. (Author/NCR)

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The Evaluation of the ESEA Title VII Spanish/English Bilingual Education Program: Overview of Findings

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American Institutes for Research

This paper will present an overview of the major findings of the impact of the ESEA Title VII Spanish/English Bilingual Program conducted by the American Institutes for Research for the United States Office of Education. The Study design and analytic procedures were discussed by the previous speaker, Dr. Coles. More information about the Study and the findings are presented in the following reports.

- Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Program, Volume I: Study Design and Interim Findings (AIR Report 48300-2/77-FR[III]) February 1977 (ERIC Report ED 138-090) 490 pp.
- Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Program, Volume II: Project Descriptions (AIR Report 48300-2/77-FR[IV]) February 1977 (ERIC Report ED 138-091) 599 pp.
- Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Program, Volume III: Year Two Impact Data, Educational Process, and In-Depth Analyses (AIR Report 48300-1/78-FR[V]) January 1978 405 pp.
- Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Program: Overview of Study and Findings (AIR Report 48300-3/78-FR[VI]) March 1978 34 pp.

These reports are available from the Office of Planning, Budgeting and Evaluation, U.S. Office of Education, 400 Maryland Ave., S.W., Federal Office Building #6, Room 3044, Washington, D.C. 20202. Volumes I and II are currently in the ERIC system and may be ordered from ERIC Documents Reproduction Service, P.O. Box 190, Arlington, VA 22210. Volumes III and the Overview of Study and Findings should also be available through ERIC in the near future.

Types of Students Served by Title VII Projects in the Study

Ethnicity

Approximately 75% of the students enrolled in the Title VII Spanish/English bilingual education classrooms were of Hispanic origin. (Students of Hispanic origin include those who are of Central American, Cuban, Mexican, Puerto Rican, South American, or Spanish [from Spain] descent.)

Age

The age distribution within each grade in the Title VII projects was not unusual. The second-graders were seven to eight years old, third-graders were eight to nine years old, fourth-graders were nine to ten years old, fifth-graders were ten to eleven years old, and sixth-graders were eleven to twelve years old.

Sex

There was an approximately even distribution of boys and girls in each grade in the Title VII projects included in the Study.

Number of Years in a Bilingual Project

Prior to the 1975-76 school year, Hispanic Title VII second-grade students had been in a bilingual project on the average for 2.0 years; third-graders for 2.3 years; fourth-graders for 2.8 years; fifth-graders for 3.1 years; and, sixth-graders for 3.2 years.

Socioeconomic Status

The socioeconomic status of the students participating in the Study was determined by results obtained from a teacher-completed portion of a student questionnaire assessing education and occupation of parents or guardians. Since the questionnaire and derived scores were specifically designed for the Impact Study, comparable data for students not participating in the Study are not available.

Generally, there was little variation in socioeconomic status across grades. The parents of the average Title VII student, across grades, had

a socioeconomic status score on the Study's socioeconomic status scale which could be obtained, for example, if they had received a high school education and were employed at an occupational level roughly equivalent to a service worker or machine operator. With somewhat less education but a slightly higher occupational level job, the parents could be at approximately the same socioeconomic status level in terms of this scale.

Language Skills

Teacher judgment related to student assignment to different test packages. Teachers were asked to assess each of their student's ability to take Reading tests, Mathematics tests, and questionnaires in English and in Spanish. Based on these judgments, students were assigned to one of four language groups for test-taking purposes: (1) English monolingual, (2) English-dominant bilingual, (3) Spanish-dominant bilingual, or (4) Spanish monolingual. This assignment determined the level of difficulty of each test the student took in English Language Arts and Spanish Language Arts. It also was used to determine which version (the English or the Spanish) of the Mathematics test and Student Questionnaire the student would receive. Approximately a third of the second-graders were considered Spanish monolingual by their teachers, with approximately a third being considered English monolingual. Approximately 60% of the second-graders were judged by their teachers to be English monolingual or English-dominant bilingual. For the third-graders, approximately 74% were judged by their teachers to be either English monolingual or English-dominant bilingual (41% were judged to be English monolingual). Approximately three-quarters of the fourth-, fifth-, and sixth-graders in the Title VII classrooms were judged to be either English monolingual or English-dominant bilingual students.

Student assessment related to teacher judgment. Using items from the Student Questionnaire which tapped the student's self-judged proficiency in understanding and speaking English and Spanish and the student's feelings when speaking Spanish and English, a composite score measuring preference for and self-judged proficiency in English vs. Spanish was developed for each student. The relationship between this score and teacher assessment of student language dominance was examined. The two were highly related in that students designated by their teachers as "monolingual Spanish speakers" got low scores on this composite measure

reflecting low preference for English and low self-judged English proficiency, students designated as "monolingual English speakers" obtained high scores on this composite measure, and students identified as "bilingual English/Spanish speakers" scored between the two monolingual groups. The same pattern of differences among means on this composite score occurred at every grade level.

Reason for presence in a Title VII classroom. Generally, less than a third of the students in the Title VII classrooms were there because of their need for English instruction (limited proficiency in English) as judged by the classroom teacher. For students of Hispanic background, 35% in the second-grade Title VII classrooms were there because of their need for English instruction. For grades 3, 4, 5, and 6, the corresponding percentages were, respectively, 30%, 29%, 19%, and 27%.

English Reading scores. Relative to national norms, Title VII Hispanic students, across grades, were performing generally at about the 20th percentile in English Reading.

Educational Goals of Title VII Projects in the Study

One of the mandated goals of the Impact Study was determining the educational practices operating in participating Title VII projects. This was done through the use of on-site interviews with project directors and teaching staff and through direct classroom observation.

Project director interview findings. As part of the data collection efforts, each project director was asked, "After the Spanish-dominant child is able to function in school in English, what happens to the child?" Eighty-six percent reported that the student remains in the bilingual project; 8% responded that the student is transferred to an English-only classroom with some Spanish Language follow-up; 5% of the project directors responded that the student is transferred to an English-only classroom with no Spanish language maintenance. These findings reflect Title VII project activities which run counter to the "transition" approach strongly implied by the ESEA Title VII legislation. (Transition in this sense implies that the native language of the student with limited English-speaking ability is used temporarily as a bridge to help the student gain competence in

English. Under this approach, when a student is able to function in a regular English instruction classroom, he or she is transferred out of the bilingual project classroom.) In fact, project goals were more consistent with a maintenance approach to bilingual education. (Maintenance in this sense implies that when a student is able to function in a regular English instruction classroom, he or she remains in the bilingual project to sustain or build competence in the native language and in English.) Project goals often included the objective that the English-monolingual and English-dominant students become fluent in Spanish as well as in English.

Classroom teacher interview findings. In addition to the Title VII project director interviews, Title VII classroom teachers were interviewed and observed. The results of these detailed interviews and observations were consistent with those obtained from the project directors; that is, the Title VII teachers were in fact implementing project activities consistent with the goals as stated by the project directors.

Costs Associated with the Title VII Bilingual Project Schools and Non-Title VII Schools for 1975-76

During site visits to each participating site, AIR staff interviewed project staff and school and district administrative personnel to obtain per-pupil costs associated with both Title VII and Non-Title VII students at the site. Funding sources were categorized into (1) ESEA Title VII bilingual funds, (2) bilingual funds from the State and other Non-Title VII federal programs, (3) federal and state funds not associated with bilingual education, and (4) basic district funds.

Per-pupil costs for Title VII students from Title VII funds ranged, depending on region of the country, from $150 to $739 with an average of $310. In addition to these Title VII funds, Title VII students also received additional per-pupil funds from other bilingual funding sources ranging from $18 to $71 with an average of $44. Additional funds coming from other State and federal funding sources not associated with bilingual education for the Title VII schools ranged from $0 to $271, with an average of $174. Non-Title VII schools received additional funds ranging from $0 to $190, with an average of $154.

Considering all of these additional non-district per-pupil funds, the total ranged from $321 to $984 with an average of $531 for the Title VII students. Non-Title VII students received from $0 to $190 for total non-district funds with an average of $154. When these funds are added to the basic district per-pupil funds, the grand total for Title VII students ranged from $1,127 to $2,120 with an average of $1,398. The grand total for Non-Title VII students ranged from $922 to $1,534 with an average of $1,022. Thus, Title VII students were, on the average, recipients of an additional $376 per student in the Title VII classroom.[2]

Characteristics of Teachers and Teacher Aides in Title VII Projects

Overall Qualifications

Eighty-six per cent of the Title VII teachers and 71% of the Title VII aides said that they had been teaching for two years or more; 78% of the Title VII teachers and 8% of the Title VII aides said that they had a regular or a bilingual teaching credential; and 31% of the Title VII teachers and 1% of the Title VII aides reported having a master's degree.

Training and Experience in Bilingual Education

Sixty-five percent of the Title VII teachers and 65% of the Title VII aides said that they had two years or more of bilingual teaching experience. Seventy-four percent of the Title VII teachers and 55% of the Title VII aides said that they had some college course work in bilingual education. Ninety-four percent of the Title VII teachers and 80% of the Title VII aides said that they had attended inservice or district workshops in bilingual/bicultural education in the last five years. Sixty-three percent of the Title VII teachers and 41% of the Title VII aides reported having attended a bilingual/bicultural conference during the last five years.

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[2]The sum of the averages does not equal the average total funds received because not all schools received (and/or reported) funds in all four categories.

Degree of Bilinguality

Sixty-seven percent of the Title VII teachers and 90% of the Title VII aides said that they used both Spanish and English in the home. Sixty-nine percent of the Title VII teachers who had children and 88% of the Title VII aides who had children said that they used both Spanish and English with their children. Sixty-nine percent of the Title VII teachers and 28% of the Title VII aides said that they used both Spanish and English in speaking with their bilingual friends. Fifty percent of the Title VII teachers and 66% of their aides said that they were proficient in both Spanish and English.

Impact of Title VII Program on Student Achievement and Attitudes

Results from Second- and Third-Grade Follow-On Sample Fall 1975 to Fall 1976 Analysis

A sample of students in grades 2 and 3 during the 1975-76 school year was tested again in the fall of 1976. Those students followed into the 1976-77 school year appeared to be different from those not selected for this third testing with respect to geographic distribution, proportion of students within the Hispanic ethnic group who were Mexican-American and Puerto Rican, socioeconomic status, and reason for being in the Title VII Program. (In comparison with the students not followed, the Follow-On Sample (1) was less balanced geographically across the United States, (2) contained proportionately more students of Puerto Rican heritage than Mexican-American within the Hispanic ethnic group, (3) had fewer Title VII students judged by their teachers during the 1975-76 school year to be in the Title VII Program because of their need for English instruction, and (4) contained Title VII students who were of higher socioeconomic status.)

The fall-to-fall achievement gains in English Reading and in Mathematics Computation in Title VII projects were neither significantly nor substantially different from what would have been expected without participation in a Title VII project.

A second result is that the English Reading percentile rank of the average Title VII Hispanic student remained at approximately the same level between fall 1975 and fall 1976 (approximately 20th percentile) for the second- and third-graders who were followed into the third and fourth grades. In general, the status of the Title VII Follow-On students in

Mathematics Computation also remained quite constant from fall 1975 to fall 1976 (approximately 30th percentile for the second-graders and 40th percentile for the fourth-graders).

Results from Second Through Sixth Grade Full Impact Study Sample Fall 1975 to Spring 1976 Analysis

English Language Arts and Mathematics. In general, the results of the three methods of Title VII impact analysis (standardized residual gain score analysis, analysis of covariance, and comparison of pretest and posttest percentile ranks) were supportive of each other. While there were some instances of Title VII impact in English Language Arts or Mathematics in some grades, the overall across-grade Title VII student analyses showed that the Title VII Program did not appear to be having a consistent significant impact on student achievement in these two subjects.

In general, across grades, when total Title VII and Non-Title VII comparisons were made, the Title VII students in the Study were performing in English worse than the Non-Title VII students. In Mathematics, across grades, they were performing at about the same level as Non-Title VII students.

Relative to national norms, Title VII Hispanic students, across grades, were performing at about the 20th percentile in English Reading and at about the 30th percentile in Mathematics.

Student attitudes. Participation in the Title VII program did not bring about a more positive student attitude toward school and school-related activities. In general, the students appeared to have a fairly neutral attitude (neither strongly positive nor strongly negative) toward school in both Title VII projects and Non-Title VII schools.

Spanish Reading. While no appropriate test norms or comparison groups were available to assess the relative impact of Title VII on the acquisition of Spanish Reading, there was an increase in the scores on the Spanish Reading test (Prueba de Lectura) between the pretest and posttest in the 1975-76 school year for Title VII students.[3]

[3] Comparative analyses of the gains were not feasible because (1) the number of Non-Title VII comparison students completing the Prueba de Lectura was exceedingly small and (2) no appropriate normative information was available for the particular test score used in these analyses (a total raw score based upon only those items judged to be lexically appropriate for students of various Hispanic backgrounds).

Relationship Between (1) Gains in Student Achievement and Attitudes and (2) Classroom Procedures, Classroom Environment, and Teaching Staff Characteristics

Classroom Procedures

Detailed descriptions of instructional practices in the classrooms were obtained through interviews with teachers and classroom observations for a subsample of the participating Title VII and Non-Title VII classrooms during the 1975-76 school year. Within the set of Title VII classrooms participating in the Impact Study, half were selected for this intensive analysis. In all, 161 classrooms were selected for intensive analysis, 120 of which were Title VII and 41 of which were Non-Title VII classrooms. All Title VII projects in the Study were represented in this intensive analysis subsample. Since the objective of these process analyses was to assess the effects of various instructional strategies and to discover the more effective strategies for the kinds of students included in the Impact Study Sample, the instructional practices in the classrooms of all the Intensive Sample students (Title VII and Non-Title VII) were included. These process analyses should not be viewed as an evaluation of all bilingual education processes, since the sample of classrooms participating in the Intensive Sample and in the Impact Study Sample were not chosen to be representative of the universe of all classrooms implementing bilingual education practices but were by mandate of the Study restricted to Title VII Spanish/English bilingual projects and the comparison schools in the Study. However, because of the wide variety of instructional processes present in participating Title VII and Non-Title VII classrooms, it seems reasonable to assume that these analyses are fairly comprehensive and that they do represent findings that might be generalizable to students such as those involved in the educational processes analyzed. The classroom level educational process variables examined are shown in Table 2.

English Language Arts Educational Processes. While no consistent results were found across the grades (2 through 6) in the Study for any of the process variables and test scores and student attitudes examined, for three of the grades the Extent of Grouping (to form smaller subgroups of students within the class for instructional purposes) was significantly

TABLE 2

Classroom Level Educational Process Variables

Average Teacher Hours per Student per Week
Average Adult Hours per Student per Week
English as a Second Language Is Taught
Spanish Language Arts Is Taught
Spanish as a Second Language Is Taught
Whole-Class Instruction in English as a Percentage of Total English Instructional Time
Individualized Instruction in English as a Percentage of Total English Instructional Time
Group Instruction in English as a Percentage of Total English Instructional Time
Average English Hours per Student per Week
Grouping Index for English
English as a Second Language as a Percentage of Total English Time
Spanish Use Allowed in English Classes
Whole-Class Instruction in Spanish as a Percentage of Total Spanish Instructional Time
Individualized Instruction in Spanish as a Percentage of Total Spanish Instructional Time
Group Instruction in Spanish as a Percentage of Total Spanish Instruction Time

(continued)

TABLE 2 (continued)

Classroom Level Educational Process Variables

Average Spanish Hours per Student per Week
Grouping Index for Spanish
Spanish as a Second Language as a Percentage of Total Spanish Time
English Use Allowed in Spanish Classes
Whole-Class Instruction in Mathematics as a Percentage of Total Mathematics Instructional Time
Individualized Instruction in Mathematics as a Percentage of Total Mathematics Instructional Time
Group Instruction in Mathematics as a Percentage of Total Mathematics Instructional Time
Average Mathematics Hours per Student per Week
Grouping Index for Mathematics
Spanish Use Allowed in Mathematics Class

and positively related to gains in one or more of the tests used to assess English proficiency. That is, the greater the grouping and regrouping of students, the greater the gains in student achievement.

Mathematics Educational Processes. While no consistent results were found across all grades in the Study, it does appear that the more whole-class instruction there is, the less the Mathematics gains; and the more grouping or individualized instruction, the greater the gains. This was the same finding as for the English Language Arts Educational Process Analysis.

The extent of Spanish Use Permitted in Mathematics Class was found generally to be unrelated to student gains in Mathematics. That is, the teacher use of Spanish or the student use of Spanish during the Mathematics instruction does not appear to produce gains in Mathematics.

Spanish Language Arts Educational Processes. There was a consistent positive relationship between Extent of Grouping and gains in the Spanish as a Second Language test scores. That is, the greater the grouping and regrouping of students, the greater the gains in student achievement.

The average number of Hours per Student per Week in Spanish Language instruction was positively related to gains in the Spanish as a Second Language scores. However, there were no significant relationships in any grade between hours spent per week in Spanish Language instruction and the Spanish Reading test score gains.

Classroom Environment

There was no consistent relationship found across grades between any of the gains in student achievement or attitudes and the variable, Proportion of Hispanic Students in the Classroom. That is, as the number of Hispanic students in a classroom relative to the number of non-Hispanic students increased or decreased, there was no corresponding change in gains in any of the student outcome measures in English Language Arts, Mathematics, Student Attitude Toward School, or Spanish Language Arts for students in that classroom. The degree to which English is used in the home and neighborhood (as measured by the Parent Questionnaire) was also found to have no consistent relationship with gains in any of the student test scores in English, Spanish, or Mathematics or attitudes across grades.

Teaching Staff Characteristics

The relationships between almost all the characteristics of teachers and teacher aides assessed by the Study and gains in student outcome measures did not extend across more than one or two grades; and at times, a given characteristic was positively related with an outcome for one grade and negatively related with the same outcome measure for another grade. It thus appears that teacher and teacher aide overall teaching qualifications (highest college degree, type of state teaching credential, and years of full-time teaching experience), bilingual teaching qualifications (years of teaching in a bilingual program, college training in bilingual education, and attendance at conferences on bilingual education), and bilinguality (language proficiency presently and as a teenager and as a child; language usage at home, with own children, and with bilingual friends) have little relationship to student gains in English Reading, English as a Second Language, Mathematics, and Spanish Reading; or to a more positive attitude on the part of students toward school and school-related activities, attitude toward English usage, or attitude toward Spanish usage.